

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the matter of	)	
	)	
Amendment of Part 97 of the Commission's Rules	)	
Governing the Amateur Radio Service Concerning	)	RM-11306
Permitted Emissions and Control Requirements	)	
	)	

**To: The Commission**

**Revised Comments of Alexander Krist, Amateur Radio Station KR1ST**

February 3, 2006

**0. Revised**

**Please disregard earlier file.**

**I. Introduction**

The following are my comments about the amendments to Part 97 as proposed by the Amateur Radio Relay League (ARRL). I have been a licensed Amateur Radio Operator for over twenty years and hold degrees in Electronics and Computer Technology. I am currently employed as a Programmer/Analyst.

I fully agree with the ARRL that unnecessary regulation should not stand in the way of experimentation and exploration which could lead to beneficial new technologies. However, I am against the proposed amendments to Part 97 and ask that the Commission reject the ARRL Petition.

## II. Discussion

### *1. Representation*

One cannot escape the impression that the proposed amendments are written for the interests of a very small portion of the Amateur Radio Community. In fact, the Ad Hoc HF Digital Committee that developed the proposed amendments to Part 97 consists of only five members (not including the two liaisons), all with very strong interest in High Frequency (HF) digital communications. Even though the ARRL implies that the Petition is a consensus proposal reached through a democratic process, the ARRL made no effort to make parties with different interests part of the Ad Hoc Committee. Dissenting opinions were not well-received by the Ad Hoc Committee, which resulted in one member resigning from the Committee and another writing an alternate proposal. Unfortunately, the proposal that is before you is based on controversy and not consensus.

Even though the ARRL is the largest Amateur Radio organization in the country, it does not represent the majority of Amateur Radio Operators. It appears that there is not even consensus within its own membership about the proposed amendments.

### *2. Needs Assessment*

Indeed times are changing and so are the needs and population of the Amateur Radio Service. It is wise to review regulations from time to time to make sure they reflect the realities of today and tomorrow.

However, the ARRL does not make the case in its Petition to justify such a dramatic change in frequency band allocations and regulations. Only one case is cited where a "technical experimenter" asked the ARRL about symbol

rate restrictions for HF communications. What they failed to mention, however, is that the "technical experimenter" they referred to in the Petition happens to be a member of the Ad Hoc HF Digital Committee and is a driving force behind this Petition. This person has a vested interest in Winlink software and technology, which would greatly benefit from these proposed amendments. This gives at least the impression of a conflict of interest.

The ARRL properly suggested to this person to look into an experimental license. Indeed, a mechanism is already in place to develop new technologies through experimental licenses. The Amateur Radio Service has benefited from such licenses. For instance, experimental licenses on the 60m band resulted in expansion of HF frequency allocations to the Amateur Radio Service.

The ARRL argues that its proposed amendments are necessary to allow for experimentation and development of new technologies. However, the Amateur Radio Service already enjoys great freedom to experiment, and current regulations do not prohibit the development of new technologies. A complete overhaul of the frequency band allocations, as the ARRL suggests, is simply not needed.

Since the interests within the Amateur Radio Service are widely varied, it would have been prudent for the ARRL to include stakeholders with varying views in the Ad Hoc Committee so that a more balanced proposal could have been produced. The write-in campaign organized by the ARRL which allowed anyone to comment on its proposal was not sufficient to ensure adequate representation of all stakeholders. The comment review process was not transparent and seemed to be merely procedural. The ARRL gave very little feedback and the comments and alternate proposals were not available for

inspection by the public. We cannot conclude that the Petition reflects the majority vision of the Amateur Radio Service.

### *3. Revising Definitions*

The Proposal contains two amendments that would change the definition of "Bandwidth" and "Spurious Emissions".

#### *3a. Bandwidth*

The current definition of Bandwidth in Section 97.3(a)(8) gives a very specific, single measure that defines the bandwidth of a transmitted signal in terms of power and attenuation. This leaves very little room for interpretation errors.

The amendment proposed by the ARRL makes the term "bandwidth" unnecessarily vague and broad with terms like "the quality required under specified conditions" that will lead to confusion and disputes.

#### *3b. Spurious Emissions*

The proposed amendment to Section 97.3(a)(42) defines spurious emissions as emissions outside the "allocated frequency band". This amendment will allow for spurious emissions as long as they are within the frequency limits of a band allocation. Such spurious emission can be causes of interference and disputes, which can and should be prevented.

The current definition is much clearer and less prone to interpretation errors and should therefore be kept in force.

### *4. Automatic Operation and Incompatible Modes*

The ARRL Petition proposes to amend Section 97.221 in order to allow for automatic transmissions on any frequency as long as an automatically controlled station does not begin to transmit without interrogation. The ARRL relies on "respectful operating practices" and "listen-before-transmitting protocols" to deal with the interference potential.

This is not sufficient to prevent interference between incompatible modes (like phone and digital transmissions) on the same frequency. An operator may very well not be aware that another transmission is taking place on the same frequency, one that the operator cannot hear because of propagation conditions inherent to HF bands, causing unintentional interference to the other transmission. Also, an operator may not be able to recognize a digital transmission taking place on a frequency he or she would like to use to initiate an analog voice transmission. For instance, a 9600 baud FSK digital transmission sounds very similar to white noise on an FM receiver. It would be easy for an operator to mistakenly think that the frequency is available while it is not.

At this time so called the listen-before-transmitting protocols (like the recently introduced SCAMP protocol) utilized by certain software products fail because they allow the user to override this feature by simply turning it off or by selecting a higher level at which recovered audio from a receiver is considered random noise.

As long as there is no proven technology available that would reasonably prevent the aforementioned interference issues, it would be ill-advised to allow for incompatible modes on the same frequency. Automatic and Semi-Automatic operation should be limited to separate specified narrow band segments.

### *5. Bandplan*

A voluntary bandplan will only be successful when reached through consensus and not through controversy. Already this Petition is causing a lot of controversy which will hamper acceptance of a new voluntary bandplan. There is no mention in the Petition of how the new voluntary bandplan would be established, other than that the ARRL is offering to facilitate the process.

Any attempt to restructure Amateur Radio band allocations, especially on the MF and HF bands, should involve the international community through the International Amateur Radio Union in order to align the United States Bandplan for the Amateur Radio Service with similar services outside of the United States. This would be mutually beneficial in the (international) development of new technologies that may necessitate future realignment of bandplans.

### *6. Enforcement*

If the proposed amendments would be adopted they become enforceable law. This will likely lead to a multitude of complaints filed with the Enforcement Bureau, which is already combating stressed resources. The proposed amendments will add to the burden of the Enforcement Bureau when incompatible modes are allowed to mix and (semi-) automatic operation are permitted to take place anywhere on a band.

## **III. Conclusion**

What the ARRL is proposing in their Petition restructures the Amateur Radio Frequency Band Allocations and Regulations in a way that will benefit only a small segment of the Amateur Radio Community, but that has major

consequences to all Amateur Radio Operators, including international operators. Any change in band allocations should be inclusive of all interested parties and should be placed in an international context.

Considering the foregoing, I would like to urge the Commission to not adopt the amendments to Part 97 as proposed by the ARRL.

Respectfully submitted,

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